



4-12-3

Atty. Dkt. No. 039153-0441 (GO406)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Philip A. Fisher et al.

Title: ENHANCED TRANSISTOR GATE  
USING E-BEAM RADIATION

Appl. No.: 10-017855

Filing Date: 12/14/2001

Examiner: Julio J. Maldonado

Art Unit: 2823

**CERTIFICATE OF EXPRESS MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service's "Express Mail Post Office To Addressee" service under 37 C.F.R. § 1.10 on the date indicated below and is addressed to: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450.

EV 227049612 US September 11, 2003  
(Express Mail Label Number) (Date of Deposit)

Deborah Kocorowski  
(Printed Name)

(Signature)

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**

Mail Stop NON-FEE AMENDMENT  
Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Submitted herewith on Form PTO-1449 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(c), before the mailing date of either a final action under 37 CFR §1.113, a notice of allowance under 37 CFR §1.113, or an action that otherwise closes prosecution in the application.

**RELEVANCE OF EACH DOCUMENT**

All of the documents are in English.

Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO-1449 be returned in accordance with MPEP §609.

**FEE**

A fee in connection with submission of an information disclosure statement under 37 CFR §1.97(c) in the amount of \$180.00 in accordance with 37 CFR §1.17(p) is attached.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 06-1447. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1447.

Respectfully submitted,

Date 9/11/03

By 

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Form PTO-1449 (MODIFIED)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 039153-0441 (G0406)	SERIAL NO. 10/017,855
<b>INFORMATION DISCLOSURE CITATION</b> (Use several sheets if necessary)		APPLICANT Philip A. Fisher et al.	
		FILING DATE 12/14/2001	GROUP ART UNIT 2823

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	A1	6,420,097	07/16/2002	Pike et al.			
	A2	6,395,447	05/28/2002	Ishii et al.			
	A3	6,358,670	03/19/2002	Wong et al.			
	A4	6,319,655	11/20/2001	Wong et al.			
	A5	6,200,903	03/13/2001	Oh et al.			
	A6	6,174,818	01/16/2001	Tao et al.			
	A7	6,057,066	05/02/2000	Hanawa			
	A8	5,994,225	11/30/1999	Liu et al.			
	A9	5,962,195	10/05/1999	Yen et al.			
	A10	5,658,469	08/19/1997	Jennison			
	A11	4,446,222	05/01/1984	Kress			
	A12	4,394,211	07/19/1983	Uchiyama et al.			

## FOREIGN PATENT DOCUMENTS

REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION	
						YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

A13	Patent Abstracts of Japan for Japanese Patent Application No. 09252189, 9 April 1999 (1 pg.).
A14	Chiong et al., "Resist contrast enhancement in high resolution electron beam lithography," Journal of Vacuum Science & Technology, Volume 7, No. 6, November 1989, pgs. 1771-1777 (8 pgs.).
A15	Lee et al., "Fabrication of 0.06 $\mu$ m Poly-Si Gate Using DUV Lithography with a Designed Si <sub>x</sub> O <sub>y</sub> N <sub>z</sub> Film as an Arc and Hardmask," Symposium on VLSI Technology Digest of Technical Papers, 1997, pps. 131-132 (2 pgs.).
A16	D. W. Hess and D. B. Graves, "Plasma-Enhanced Etching and Deposition," Microelectronics Processing, (Eds.: D. W. Hess & K. F. Jensen) ACS (1989), Ch. 8 pp. 337-440 (34 pgs.).
A17	Yang et al., "Electronic Beam Processing for Spin-on Polymers and its Applications to Back-End-of-Line (BEOL) Integration," Materials Research Society Symposium Proceedings, Vol. 511, April 1998 (7 pgs.).
A18	PCT International Search Report for PCT/US02/05640 dated 10/02/2002 (7 pgs.).
A19	International Preliminary Examination Report for PCT/US02/05640 dated 07/03/2003 (8 pgs.).

EXAMINER

DATE CONSIDERED

- \* **EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include any copy of this form with next communication to applicant.